

Customer No. 28880

Confirmation No. 6060

PTO/SB/08A (08-03)

Approved for use through 07/31/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/634,531
Filing Date	August 5, 2003
First Named Inventor	Adam R. Johnson
Art Unit	1624
Examiner Name	Kahsay Habte
Attorney Docket Number	PC25201A

Sheet 1 of 4

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
KH ↓		US- 5,130,317	07-14-1992	Ekkehard Baader	
		US- 5,260,323	11-09-1993	Ekkehard Baader	
		US- 5,519,038	05-21-1996	Ekkehard Baader	
		US- 2003/0229103 A1	12-11-2003	Weithmann, et al	
		US- 6,008,243	12-28-1999	Bender, et al	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
KH ↓ ↓		CA 2,082,076	11-04-1992	Weidmann, et al		
		EP 0 935 963 A2	08-18-1999	McClure, et al		
		EP 1 138 680 A1	10-04-2001	Noe, et al		
		WO 00/09485	02-24-2000	McClure, et al		
		WO 01/12611 A1	02-22-2001	Julian Blagg		
		WO 01/63244 A1	08-30-2001	Chen, et al		

Examiner
SignatureDate
Considered

3/28/2005

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Customer No. 28880

Confirmation No. 6060

PTO/SB/08A (08-03)

Approved for use through 07/31/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/634,531
--------------------	------------

Filing Date	August 5, 2003
-------------	----------------

First Named Inventor	Adam R. Johnson
----------------------	-----------------

Art Unit	1624
----------	------

Examiner Name	Kahsay Habte
---------------	--------------

Attorney Docket Number	PC25201A
------------------------	----------

Sheet 2 of 4

U. S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ^o
		Country Code ² Number ⁴ Kind Code ³ (if known)				
KM ↓ ↓ ↓		WO 02/34726 A2	05-02-2002	Noe, et al		
		WO 02/34753 A2	05-02-2002	Bronk, et al		
		WO 01/14344	03-01-2001	Herrmann, et al		
		EP 1069110	01-17-2001	Kimura, et al		
		WO 96/28430	09-19-1996	Nussbaumer		
		WO 03/076416	09-18-2003	Gaudilliere, et al		

**Examiner
Signature**

Date Considered

3/27/2005

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/634,531
Filing Date	August 5, 2003
First Named Inventor	Adam R. Johnson
Art Unit	1624
Examiner Name	Kahsay Habte
Attorney Docket Number	PC25201A

Sheet

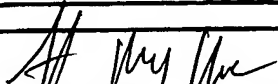
3

of

4

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
KH		Office Action from 10/264,764 mailed 6.16.03	
		Billinghurst, et al, "Comparison of the degradation of type II collagen and proteoglycan in nasal and articular cartilages induced by interleukin-1 and the selective inhibition of type II collagen cleavage by collagenase", Arth. & Rheum. Vol. 43 (3) March 2000, pp. 664-672.	
		Billinghurst, et al, "Enhanced Cleavage of Type II Collagen by Collagenases in Osteoarthritic Articular Cartilage", J. Clin. Invest., Vol. 99 (7) April 1997 pp.1534-1545.	
		Chen, et al, "Structure-based Design of a Novel, Potent, and Selective Inhibitor for MMP-13 Utilizing NMR Spectroscopy and Computer-Aided Molecular Design", J. Am. Chem. Soc., Vol. 122 (40), 2000, pp. 9648-9654.	
		Dahlberg, et al, "Selective Enhancement of Collagenase-Mediated Cleavage of Resident Type II Collagen in Cultured Osteoarthritic Cartilage and Arrest with a Synthetic Inhibitor That Spares Collagenase 1 (Matrix Metalloproteinase 1)", Arth. & Rheum. Vol. 43 (3), March 2000, pp.673-682.	
		Freement, et al, "In situ zymographic localisation of type II collagen degrading activity in osteoarthritic human articular cartilage" Ann. Rheum. Dis. Vol. 58 1999 pp.357-365.	
		Hirota, et al, "Novel Synthesis of Pyrido[3,4-d]Pyrimidines, Pyrido[2,3-d]-Pyrimidines, and Quinazolines via Palladium-Catalyzed Oxidative Coupling", Heterocycles, Vol. 37 (1) 1994 pp. 563-570.	
		Lovejoy, et al, " Crystal structures of MMP-1 and -13 reveal the selectivity of collagenase inhibitors" Nature Structural Bio., Vol 6 (3), March 1999 pp. 217-221.	
		Mitchell, et al, "Cloning, Expression, and Type II Collagenolytic Activity of Matrix Metalloproteinase-13 from Human Osteoarthritic Cartilage", J. Clin. Invest., Vol. 97 (3), February 1996, pp. 761-768.	
		Moy, et al, "High-resolution Solution Structure of the Catalytic Fragment of Human Collagenase-3 (MMP-13) Complexed with a Hydroxamic Acid Inhibitor", J. Mol. Bio., Vol. 302, 2000, pp. 671-689.	

Examiner
Signature

Date
Considered

3/28/2005

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.88. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete If Known			
		Application Number	10/634,531		
		Filing Date	August 5, 2003		
		First Named Inventor	Adam R. Johnson		
		Art Unit	1624		
		Examiner Name	Kahsay Habte		
Sheet	4	of	4	Attorney Docket Number	PC25201A

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
KK		Neuhold, et al, "Postnatal expression in hyaline cartilage of constitutively active human collagenase-3 (MMP-13) induces osteoarthritis in mice", J. Clin. Invest., Vol. 107 (1), pp. 35-44.	
		Reboul, et al, "The New Collagenase, Collagenase-3, Is Expressed and Synthesized by Human Chondrocytes but not by Synviocytes", J. Clin. Invest., Vol. 97 (9) May 1996, pp. 2011-2019.	
		Wernicke, et al, "Cloning of Collagenase 3 from the Synovial Membrane and Its Expression in Rheumatoid Arthritis and Osteoarthritis", J. of Rheum. 1996, Vol. 23 (4), pp. 590-595.	
		"Invitation to Pay Additional Fees" from corresponding PCT International Applic. no. PCT/TB03/03518 (5 pages)	

Examiner Signature		Date Considered	3/28/2005
--------------------	---	-----------------	-----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.